



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,574	12/06/1999	AALBERTUS PIETER KROESBERGEN	702/991620	5330

7590 07/29/2003

RUSSELL D ORKIN  
700 KOPPERS BUILDING  
436 SEVENTH AVENUE  
PITTSBURGH, PA 152191818

EXAMINER

JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 07/29/2003

22

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/455,574

Applicant(s)

KROESBERGEN, AALBERTUS  
PIETER

Examiner

Jonathan Johnson

Art Unit

1725

**-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35,36,38-50,61-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35,36,38,39,42-50 and 61-64 is/are rejected.
- 7) ☒ Claim(s) 40 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08-875,237.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 21.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-18-03 has been entered including Applicant's request for termination of suspension of action under 37 CFR 1.103, which expired on 7-18-03.

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35, 36, 39, and 41-45, and 47-49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103 (a) as obvious over Masuda. Masuda et al. teaches the preparation of highly water absorbent materials employing resins produced by

polymerizing cellulose, at least one polymerizable monomer, a cross linking agent, and optionally in the presence of a radical polymerization catalyst (abstract and Column 5, Lines 1-6). The composition can be mixed with various additives (Column 5, Lines 50-56). The water absorbing resins may be applied to various substrates such as cloth or paper by any known method (Column 6, Lines 3 et seq). Such methods include immersing the substrate in an aqueous solution of the mixture and subsequently drying the substrate. Additionally, the polymerization may result after combining with the substrate and then dried for use (Column 6, Lines 1-23). Masuda anticipated the claimed subject matter. Masuda does not specifically disclose that the super absorbent material is in the form of a plurality of discrete, substantially semi-spherical islets with a diameter of between 10 and 1000 microns. However, Masuda uses the same components in the same amounts and appears to prepare the substrate by an identical super-absorbent material. Alternatively, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have optimized the shape and size of the super-absorbent material of Masuda, since it has been held that discovering the optimum or workable ranges involve only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present case, it would have been obvious to the skilled artisan to have optimized the shape and size of the super absorbent material of Masuda motivated by the desire to obtain a substrate having predetermined absorbency properties. It is the examiner's position that the substrate of Burkholder and Gross is identical to or only slightly different than the claimed substrate prepared by the method of the claimed method, because both substrates are formed by a similar method and result in a highly absorbent article. Even though the product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The

patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Alternatively, it is well known in the art to use a catalyst material in order to control the rate of crosslinking and it would have been obvious to the skilled artisan to add a catalyst material to the composition of Burkholder and Gross either anticipated or strongly suggested the claimed subject matter. It is noted if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the prior art.

Masuda does not specifically disclose that the super absorbent material is in the form of a plurality of discrete, substantially semi-spherical islets with a diameter of between 10 and 1000 microns. However, Masuda uses the same components in the same amounts and appears to prepare the substrate by an identical super-absorbent material. Alternatively, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have optimized the shape and size of the super-absorbent material of Masuda, since it has been held that discovering the optimum or workable ranges involve only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present case, it would have been obvious to the skilled artisan to have optimized the shape and size of the super absorbent material of Masuda motivated by the desire

to obtain a substrate having predetermined absorbency properties. With regard to Claim 47, it is the examiner's position that the substrate of Masuda is identical to or only slightly different than the claimed substrate prepared by the method of the claimed method, because both substrates are formed by a similar method and result in a highly absorbent article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Masuda either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the Masuda.

Claims 35-39, 41-45 and 47-49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103 (a) as obvious over Burkholder, Jr. or Gross. Burkholder and Gross disclose the production of absorbent substrates by applying a composition of a hydrophilic polymer together with a cross-linking agent on a substrate and subsequently curing of the coating. The coating can be applied to various substrates to form a super-absorbent article,

Art Unit: 1725

such as surgical sponges and fibrous sheets and webs. Burkholder and Gross anticipated the claimed subject matter. Burkholder and Gross do not specifically disclose that the super absorbent material is in the form of a plurality of discrete, substantially semi-spherical islets with a diameter of between 10 and 1000 microns. However, Burkholder and Gross use the same components in the same amounts and appears to prepare the substrate by an identical method as the present invention; thus it is the examiner's position that Burkholder and Gross inherently have a identical super-absorbent material. Alternatively, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have optimized the shape and size of the super-absorbent material of Burkholder and Gross, since it has been held that discovering the optimum or workable ranges involve only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present case, it would have been obvious to the skilled artisan to have optimized the shape and size of the super-absorbent material of Burkholder and Gross motivated by the desire to obtain a substrate having predetermined absorbency properties. With regard to Claims 37, 41-45 and 47, it is the examiner's position that the substrate of Burkholder and Gross is identical to or only slightly different than the claimed substrate prepared by the method fo the claimed method, because both substrates are formed by a similar method and result in a highly absorbent article. Even though the product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences

Art Unit: 1725

between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Alternatively, it is well known in the art to use a catalyst material in order to control the rate of crosslinking and it would have been obvious to the skilled artisan to add a catalyst material to the composition of Burkholder and Gross either anticipated or strongly suggested the claimed subject matter. It is noted if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Burkholder and Gross.

Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burkholder, Jr. or Gross. With regard to Claim 50, neither Burkholder or Gross disclose the specific composition ranges of the components. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have optimized or found workable concentration ranges for the composition of Burkholder and Gross since it has been held that discovering the optimum or workable ranges involves only routine skill in the art *In re Aller*, 105 USPQ 322.

Claims 46 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda, Burkholder, Jr. or Gross in view of Bottiglione et al. (5,246,770). Masuda, Burkholder, and Gross do not specifically disclose adding soot to the composition to make it conductive or forming a cable comprising the substrate material as the sheathing material. Bottiglione discloses that it is known in the art to apply conductive material to a super absorbent coated substrate material and use that material as a sheathing for a cable. It would have been obvious to



Art Unit: 1725

the skilled artisan to have used the substrate of Masuda, Burkholder, or gross as a cable sheathing as taught by Bottiglione, motivated by the desire to obtain an effective water barrier for a cable. Additionally it would have been obvious to the skilled artisan to have added a conductive material to the composition of masuda, Burkholder, or Gross, as taught in Bottiglione, motivated by the desire to form an electrically conductive material.

Claims 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda, Burkholder, Jr. or Gross in view of Nishino et al. (5,275,884).

Nishino teaches an adsorbent product used in a baby diaper and packaging material (Column 5, Lines 61 through Column 6, Line 5). It would have been obvious to the skilled artisan to have used the substrate of Masuda, Burkholder, or gross as a agricultural substrate as taught by Nishino et al. motivated by the desire to effectively contain liquids.

Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda, Burkholder, Jr. or Gross in view of Miller (4,321,997). Miller teaches an agricultural substrate comprising an absorbent (abstract). It would have been obvious to the skilled artisan to have used the substrate of Masuda, Burkholder, or gross as a agricultural substrate as taught by Miller, motivated by the desire to contain food juices.

***Allowable Subject Matter***

Claims 40 and 41 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest or teach adding foaming agent to the super absorbent composition prior to applying the composition to the substrate and causing the composition to be foamed at any time after the addition of the foaming agent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. In re Hill, 284 F.2d 955, 128 USPQ 197 (CCPA 1960). Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. In re Clemens, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980) (Claims were directed to a process for

Art Unit: 1725

removing corrosion at "elevated temperatures" using a certain ion exchange resin (with the exception of claim 8 which recited a temperature in excess of 100C). Appellant demonstrated unexpected results via comparative tests with the prior art ion exchange resin at 110C and 130C. The court affirmed the rejection of claims 1-7 and 9-10 because the term "elevated temperatures" encompassed temperatures as low as 60C where the prior art ion exchange resin was known to perform well. The rejection of claim 8, directed to a temperature in excess of 100C, was reversed.). See also *In re Grasselli*, 713 F.2d 731,741, 218 USPQ 769, 777 (Fed. Cir. 1983) (Claims were directed to certain catalysts containing an alkali metal. Evidence presented to rebut an obviousness rejection compared catalysts containing sodium with the prior art. The court held this evidence insufficient to rebut the prima facie case because experiments limited to sodium were not commensurate in scope with the claims.). In the instant case, applicant has claimed a semi-spherical islet with a diameter between 10 and 1000 microns, however applicant only presents a singular test result of a semi-spherical islet having a diameter of 250 microns to show unexpected results. It is the examiner's position that the applicant has not met his burden of proving unexpected results over the entire claimed range. Furthermore, it is the examiner's position that the singular test result presented by applicant fails to establish a trend in the exemplified data which would allow the artisan to reasonably extend the probative value the evidence through the claimed range.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 703-308-0667. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1495.

jj   
July 28, 2003

  
TOM DUNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700